

AMENDMENTS

In the claims:

1. (Amended) An array composition comprising:

- a) a substrate with a surface comprising discrete sites; and
- b) a population of microspheres comprising at least a first and a second subpopulation, wherein each subpopulation comprises:
 - i) a bioactive agent; and
 - ii) an identifier binding ligand that will bind a decoder binding ligand such that the identification of the bioactive agent can be elucidated;wherein said microspheres are randomly distributed on said surface.

2. (Amended) An array composition comprising:

- a) a substrate with a surface comprising discrete sites; and
- b) a population of microspheres comprising at least a first and a second subpopulation, wherein each subpopulation comprises a bioactive agent and does not comprise an optical signature, wherein said microspheres are randomly distributed on said surface.

6. (Amended) A method of making a composition comprising:

- a) forming a surface comprising individual sites on a substrate;
- b) randomly distributing microspheres on said surface such that said individual sites contain microspheres, wherein said microspheres comprise at least a first and a second subpopulation each comprising a bioactive agent and do not comprise an optical signature.

7. (Amended) A method of making a composition comprising:

- a) forming a surface comprising individual sites on a substrate;

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b) randomly distributing microspheres on said surface such that said individual sites contain microspheres, wherein said microspheres comprise at least a first and a second subpopulations each comprising:

- i) a bioactive agent; and
- ii) an identifier binding ligand that will bind a decoder binding ligand such that the identification of the bioactive agent can be elucidated.

8. (Amended) A method of decoding an array composition comprising:

a) providing an array composition comprising:

- i) a substrate with a surface comprising discrete sites; and
- ii) a population of microspheres comprising at least a first and a second subpopulation, wherein each subpopulation comprises a bioactive agent;

wherein said microspheres are randomly distributed on said surface;

b) adding a plurality of decoding binding ligands to said array composition to identify the location of at least a plurality of the bioactive agents.

13. (Amended) A method of determining the presence of a target analyte in a sample comprising:

a) contacting said sample with a composition comprising:

- i) a substrate with a surface comprising discrete sites; and
- ii) a population of microspheres comprising at least a first and a second subpopulation each comprising a bioactive agent and do not comprise an optical signature;

wherein said microspheres are randomly distributed on said surface such that said discrete sites contain microspheres; and

b) determining the presence or absence of said target analyte.

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14. (Amended) A method of determining the presence of a target analyte in a sample comprising:

a) contacting said sample with a composition comprising:

i) a substrate with a surface comprising discrete sites; and

ii) a population of microspheres comprising at least a first and a second subpopulation each comprising:

1) a bioactive agent; and

2) an identifier binding ligand that will bind a decoder binding ligand such that the identification of the bioactive agent can be elucidated;

wherein said microspheres are randomly distributed on said surface such that said discrete sites contain microspheres; and

b) determining the presence or absence of said target analyte.

Please add the following new claims:

-15. The composition according to claim 1 or claim 2, wherein said discrete sites are wells.

16. The method according to claim 6, claim 7, claim 8, claim 13 or claim 14, wherein said discrete sites are wells.- .

REMARKS

Claims 1-16 are pending. Claims 1, 2, 6-8, and 13-14 have been amended to include the term "randomly". Support can be found throughout the specification, for example at p. 6 lines 30-32. New claims 15 and 16 recite that the discrete sites are wells. Support can be found throughout the specification, for example at p.10, line 1. For the Examiners convenience an Appendix with the text of the claims following entry of the amendments is attached hereto.

RESPONSE TO REJECTIONS